

lections—the *Pecten Testæ*, of which the valves are marked with very fine striæ and elegantly trellised. According to Filippi, this shell is only met with at depths of 25 to 30 fathoms. With these three Acephalous Mollusks were associated two Gasteropods, which are very rare in the localities usually explored by zoologists: one of these is *Monodonta limbata*, the other *Fusus lamellosus*. The latter shell, which is remarkable for the fine striæ traversing the whorls of the spire, is extremely fresh: both contained the soft parts of the animal, from which the author concludes that they must have lived where they were found.

The Corals found fixed at the great depth above mentioned are of still greater interest. There were fourteen individuals, belonging to three species of the family Turbinolidæ. One of them appeared to the author not to differ from *Caryophyllia arcuata*, a very rare species, found fossil in the Upper Tertiary strata of Piedmont at Castel-Arquato, and which has also been met with at Messina. Another species, nearly allied to *Caryophyllia clavus*, for which the author proposes the name of *C. electrica*, appears to be much more common in the submarine valley in which the telegraphic cable rested; for no less than ten individuals of it were found, all bearing evident traces of their having been developed upon it. This species does not appear to differ from a small fossil Coral, of Pliocene age, found by M. Deshayes at Douéra, in Algeria. A third species, of which the polypary is less than half an inch in height, does not enter into any established genus: the author places it between the genera *Ceratotrochus* and *Sphenotrochus*, and proposes to name it *Thalassiotrochus telegraphicus*.

Besides the above, the portion of the cable examined gave attachment to a small branch of *Salicornaria farciminoïdes*, to some Gorgonidæ, and to two *Serpulæ*, the large calcareous tubes of which were soldered to the iron wire for a considerable extent.

In his concluding remarks, the author dwells not only upon the fact that these animals, some of them of high organization, dwelling permanently at such great depths, are for the most part either rare in collections or quite unknown to naturalists, but also upon the circumstance that some of them are apparently identical with species found in a fossil state in the most recent strata surrounding the basin inhabited by them; and hence infers that, by the investigation of the deeper parts of the sea, we may probably add to the existing fauna many other species now regarded as extinct.—*Comptes Rendus*, July 15, 1861, p. 88.

Transmutation of Grasses.

In the beginning of last year (Gard. Chron., p. 4) we drew attention to some extraordinary results said to have been obtained by Prof. Buckman in his cultivation of Grasses. He believed that he had proved that in the course of cultivation *Poa aquatica* and *Glyceria fluitans*, two widely different species, lost their distinctions and became identical; that the same thing happened between the Fescues called

lioliacea and *pratensis*; and that the wild Parsnip had become ennobled under his hands in the same way as the wild Carrot was formerly, under the management of the elder Vilmorin.

M. Decaisne, the able Professor of Agriculture in the experimental department of the Garden of Plants in Paris, one of the most acute of living botanists, and an extremely cautious experimentalist, being engaged in the same line of inquiry, and having become desirous of seeing some of the living results of Professor Buckman's experiments, that gentleman readily acceded to a request that he would furnish them; and in the spring a small parcel was forwarded to Paris. [It is necessary to remark that although it passed through our hands we were prevented by other occupations from examining it.] We have now before us a report on the subject from M. Decaisne himself:—

“I was very much obliged to you for the specimens of *Glyceria* (*Poa*) *aquatica* which you were good enough to send over from Mr. Buckman. Thanks to this authentic information, the value of the experiments mentioned last year in the ‘Gardeners’ Chronicle’ begins to appear. Towards the end of last year I myself had collected and sown seeds of *Glyceria fluitans* and *G. spectabilis* (*Poa aquatica*). At this moment *G. fluitans* sown in dry ground is in full flower, without having lost any one of its characters in the smallest particular. Each plant forms a close tuft, from which arise many flowering branches, which spread over the ground just as they do in water. We have therefore, in this instance, no transmutation.

“As to *Gl. spectabilis*, it is not as yet in flower, but its creeping rhizomes, thick yellowish-green shoots, and broad leaves with rough sheaths leave no doubt as to its identity with its type. My experiment shows therefore that *Glyceria fluitans* and *Gl. spectabilis* remain unchanged.

“The curious circumstance attending the account of transmutation related by Mr. Buckman is that it rests upon a palpable mistake. The two specimens he was so good as to send me in neither case belong to the genus *Glyceria*, but are in both instances *Poa sudetica*! This brings down the whole scaffolding with which his theory was constructed.

“If, however, Mr. Buckman has fallen into an error about *Poa*, I believe that others have done the same in the case of Carrots. That is to say, for four years past I have placed myself in the same conditions as were described by M. Vilmorin, and nothing has come to pass. Wild Carrots remain field Carrots still. I cannot but believe that when M. Vilmorin saw them changing to red, yellow, and purple, such changes must have been brought about by accidental crossing. Insects must have conveyed the pollen of cultivated Carrots to the wild ones, and thus intermediate conditions have been obtained.

“May I add that I have no confidence in the discovery of a Broccoli on the cliffs of Cornwall. I am perfectly acquainted with the wild Cabbage of our French coast, and I cannot bring myself to believe it the parent of our cultivated races. However we shall learn in time, for I have been engaged for several years in experimenting on the subject.”—*From the Gardeners’ Chronicle*, Aug. 17, 1861.